

1635  
#13/K.T.  
3/9  
I.D.S.

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231, on January 20, 2002.

*[Signature]*  
Attorney for Applicant

PATENT APPLICATION

Docket No. 3302.2.1



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

**RECEIVED**

FEB 28 2002

TECH CENTER 1600/2900

Applicants: Laixin Wang

Serial No.: 09/996,507

Filing Date: November 28, 2001

For: POLYCATIONIC WATER SOLUBLE COPOLYMER  
AND METHOD FOR TRANSFERRING  
POLYANIONIC MACROMOLECULES ACROSS  
BIOLOGICAL BARRIERS

)  
)  
)  
) Group Art  
) Unit:  
)  
)  
)

INFORMATION DISCLOSURE STATEMENT

Assistant Commissioner  
for Patents  
Washington, D.C. 20231

Sir:

This Information Disclosure Statement discloses information which has come to the attention of applicant and/or his attorneys and is being submitted so as to comply with the duty of disclosure set forth in 37 C.F.R. § 1.56. In accordance with 37 C.F.R. § 1.97(b), this Statement is being filed within three (3) months of the filing date of the above-identified application or before the mailing date of a first Action on the merits.

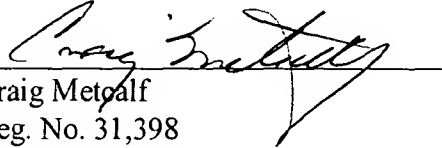
Neither applicant nor his attorneys make any representation that any information disclosed herein may be "prior art" within the meaning of that term under 35 U.S.C. §§ 102 or

103. Moreover, pursuant to 37 C.F.R. § 1.97, the filing of this Information Disclosure Statement shall not be construed as a representation that a search has been made or as an admission that the information cited herein is, or is considered to be, material to patentability as defined in 37 C.F.R. § 1.56(b).

In accordance with 37 C.F.R. § 1.98, this Information Disclosure Statement includes and is accompanied by:

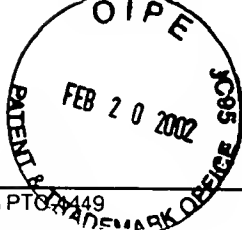
1. A completed copy of Form PTO-1449 listing the patents, publications and other information being submitted for consideration; and
2. A legible copy of each patent, publication and other item of information in written form listed on the enclosed Form PTO-1449.

Respectfully submitted,

  
Craig Metcalf  
Reg. No. 31,398  
Attorney for Applicant

Date: January 29, 2002

MADSON & METCALF  
Gateway Tower West  
15 West South Temple, Suite 900  
Salt Lake City, Utah 84101  
Telephone: 801/537-1700



COPY OF PAPERS  
ORIGINALLY FILED

RECEIVED

FEB 28 2002

Page 1 of 1

<b>FORM PTO-449</b> <b>LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT</b>  (use several sheets if necessary)	<b>SERIAL NO.</b> 09/996,507 TECH CENTER 1600/2900	<b>ATTORNEY DOCKET NO.</b> 3302.2.1
	<b>FILING DATE</b> November 28, 2001	<b>GROUP ART UNIT</b>
	<b>APPLICANT(S):</b> Laixin Wang	

**REFERENCE DESIGNATION**

**U.S. PATENT DOCUMENTS**

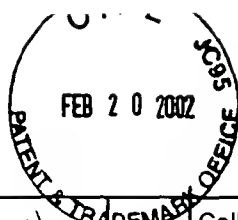
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS/ SUBCLASS	FILING DATE
	A1	20,010,005,717	06/28/2001	Wagner		04/17/2000

**NON-PATENT DOCUMENTS**

	A2	Akhtar, Saghir, et al. "The Delivery of Antisense Therapeutics," Advanced Drug Delivery Reviews 44, (2000), 3-21
	A3	Akiyama, Yoshitsugu, et al., "Synthesis of Poly(ethylene glycol)-block-poly(ethylenimine) Possessing an Acetal Group at the PEG End," Macromolecules, 2000, 33, 5841-45.
	A4	Abdallah, Bassima, et al., "A Powerful Nonviral Vector for In Vivo Gene Transfer Into the Adult Mammalian Brain: Polyethylenimine," Human Gene Therapy 7, 1947-54, October 20, 1996
	A5	Bandyopadhyay, Paramita, et al., "Enhanced Gene Transfer into HuH-7 Cells and Primary Rat Hepatocytes Using Targeted Liposomes and Polyethylenimine," BioTechniques 25: 282-292, August, 1998
	A6	Bettinger, Thierry, et al, "Size Reduction of Galactosylated PEI/DNA Complexes Improves Lectin-Mediated Gene Transfer into Hepatocytes," Bioconjugate Chemistry, 1999, 10, 558-561
	A7	Bieber, Thorsten, et al., "Preparation of Low Molecular Weight Polyethylenimine for Efficient Cell Transfection," BioTechniques 30: 74-81 (January, 2001)
	A8	Blessing, Thomas, "Different Strategies for Formation of PEGylated EGF-Conjugated PEI/DNA Complexes for Targeted Gene Delivery," Bioconjugate Chemistry 2001, 12, 529-37
	A9	Boussif, Otmane, et al, "A Versatile Vector for Gene and Oligonucleotide Transfer Into Cells In Culture and In Vivo: Polyethylenimine," Proc. Nat'l. Acad. Sci. USA, vol. 92, 7297-7301, August, 1995
	A10	Bronich, Tatiana K., et al., "Self-assembly in Mixtures of Poly(ethylene oxide)-graft-Poly(ethyleneimine) and Alkyl Sulfates, Langmuir, 1998, 14, 6101-106

<b>EXAMINER</b>	<b>DATE CONSIDERED</b>
-----------------	------------------------

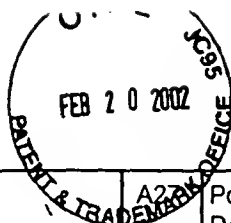
EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant(s).



A11	Coll, Jean-Luc, et al., "In Vivo Delivery to Tumors of DNA Complexed with Linear Polyethylenimine," Human Gene Therapy, 10, 1659-66, July 1, 1999
A12	De Smedt, Steffan C., et al., "Cationic Polymer Based Gene Delivery System," Pharmaceutical Research, Vol. 17, No. 2, 2000, 113-126
A13	Dheur, Sonia, et al., "Polyethylenimine but Not Cationic Lipid Improves Antisense Activity of 3'-Capped Phosphodiester Oligonucleotides," Antisense & Nucleic Acid Drug Development, 9:515-525 (1999)
A14	Diebold, Sandra S., et al., "Mannose Polyethylenimine Conjugates for Targeted DNA Delivery into Dendritic Cells," The Journal of Biological Chemistry, Vol. 274, No. 27, July 2, 1999, 19087-94
A15	Fischer, Dagmar, et al., "A Novel Non-Viral Vector for DNA Delivery Based on Low Molecular Weight, Branched Polyethylenimine: Effect of Molecular Weight on Transfection Efficiency and Cytotoxicity," Pharmaceutical Research, Vol. 16, No. 8, 1999
A16	Godbey, W.T., et al., "Poly(ethylenimine)-mediated transfection. A new paradigm for Gene Delivery," 321-28, BioMed Mater Res., June, 2000
A17	Godbey, W.T., et al., "Size matters: Molecular Weight Affects the Efficiency of poly(ethylenimine as a Gene Delivery Vehicle," BioMed Mater Res., June, 1999, 5:45(3), 268-75
A18	Godbey, W.T., et al., "Recent Progress In Gene Delivery Using Non-Viral Transfer Complexes," Journal of Controlled Release 72, 2001, 115-25
A19	Godbey, W.T., et al., "Poly(ethylenimine) and its Role in Gene Delivery," Journal of Controlled Release, 60, (1999) 149-160
A20	Goula, D., et al., "Rapid Crossing of The Pulmonary Endothelial Barrier By Polyethylenimine/DNA Complexes," Gene Therapy 2000, 7, 499-504
A21	Han, Sang-oh, et al., "Water-Soluble Lipopolymer for Gene Delivery," Bioconjugate Chemistry, 2001, 12, 337-345
A22	Kircheis, Ralf, et al., "Design and Gene Delivery Activity of Modified Polyethylenimines," Advanced Drug Delivery Reviews, Vol. 53, Issue 3, December 31, 2001, 341-358
A23	Kircheis, Ralf, et al., "Tumor Targeting with Surface-Shielded Ligan-Polycation DNA Complexes," Journal of Controlled Release, 72, 2001, 165-170
A24	Liu, Feng, et al., "Glucose-Induced Release of Glycosylpoly(ethylene-glycol) Insulin Bound to a Soluble Conjugate of Concanavalin A," Bioconjugate Chem. 1997, 8, 664-72
A25	Nguyen, H-K, et al., "Evaluation of Polyether-polyethyleneimine Graft Copolymers as Gene Transfer Agents," Gene Therapy 2000, 7, 126-138
A26	Park, Y.K., et al., "Galatosylated Chitosan-Graft-Dextran as Hepatocyte-Targeting DNA Carrier," Journal of Controlled Release, 69, 2000, 97-108

EXAMINER	DATE CONSIDERED
----------	-----------------

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant(s).



	A27	Pouton, Colin W., et al., "Key Issues in Non-Viral Gene Delivery," Advanced Drug Delivery Reviews 46 (2001) 187-203
	A28	Robaczewka, M., et al., "Inhibition of Hepadnaviral Replication By Polyethylenimine-based Intravenous Delivery of Antisense Phosphodiester Oligodeoxynucleotides to the Liver," Gene Therapy, 2001, 8, 874-881
	A29	Vinogradov, Serguei V., et al., "Self-Assembly of Polyamine-Poly(ethylene glycol) Copolymers with Phosphorothioate Oligonucleotides," Bioconjugate Chem., 1996, 9, 805-812
	A30	Wagner, Ernst, "Application of Membrane-Active Peptides for Nonviral Gene Delivery," Advanced Drug Delivery Reviews, 38, (1999) 279-289
	A31	Yu, Lei, et al., "TerplexDNA Gene Carrier System Targeting Artery Wall Cells," Journal of Controlled Release, 72, (2001), 179-189

EXAMINER	DATE CONSIDERED
----------	-----------------

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant(s).